EnGenius™
WIRELESS SOLUTION PROVIDER

EP-436

4-line Wireless Phone System

User's Manual

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Safety Instructions

Caution: *Your wireless telephone gives you freedom and flexibility to stay in touch while you move around. However, the safe and responsible use of the phone depends entirely on you.*
When using your phone equipment, safety instructions should be followed to avoid the risk of fire, electric shock, injury to person, and damage to property.

General Safety Instructions

1. When using your wireless phone, ensure your safety and the safety of others:
   a. Always watch where you are walking and standing.
   b. Don't let a phone call distract you from working safely.

2. In an emergency:
   a. If an emergency occurs, dial the emergency phone number. Remember: if you are in an area where your phone does not have a clear signal from the base, it is highly probable that the call may not go through. Locate the nearest landline telephone or other communications device to call for help.
   b. Emergency calls may not automatically provide emergency personnel with your name, phone number or location. Tell the operator
      (i) Your name and phone number
      (ii) The nature of the emergency
      (iii) Whether police, fire, or medical assistance is needed
      (iv) The exact location of the emergency, including address, cross streets, mileposts or landmarks.

3. Notice to Hearing Aid Users: This phone system is compatible with inductively coupled hearing aids.

4. Notice to Cardiac Pacemaker Users: Preliminary studies done by the US FDA and others have shown that, although Interference to the implanted cardiac pacemaker may occur when operating very closely, wireless telephones "do not seem to pose a significant problem for pacemaker wearers." However, until more is known, FDA suggests that people with pacemakers may want to take precautions when using or carrying a wireless telephone to ensure that there is ample distance between the telephone and the

pacemaker. Do not carry the handset in a breast pocket. If you have any reason to suspect that interference is taking place, turn off your handset immediately.

Product Safety Instructions

1. Read and understand all instructions.

2. Follow all warnings and instructions including those marked on the product.

3. Changes or modifications to this product not expressively approved by the manufacturer will void the warranty and the FCC authorization to operate the equipment. Use only manufacturer provided accessories.

4. Do not use the telephone near water. Never spill liquid of any kind on this product.

5. Unplug the product from the wall telephone jack and power outlet before cleaning. Do not use liquid or aerosol cleaners. Use damp cloth for cleaning.

6. Do not place this product on an unstable cart, stand or table. The product may fall and cause personal injury or damage to the product or other property. Place the base station and the charger on hard, flat surfaces.

7. Power Outage:
   In the event of a power outage, your handset charger will not recharge the handset battery, and the base station will not allow you to make an outgoing call or take an incoming call. Both the charger and the base station require electricity for operation. *You should have a telephone that does not require electricity available for use during power outage, or have a temporary backup power supply.*

8. Slots or openings in the product's housing are provided for ventilation. These openings must not be blocked or covered. Placing the product on a bed, carpeting, or other similar surface may block these openings and should be avoided. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.

9. Never push objects of any kind into this product through housing slots/openings as they may damage the product, touch dangerous voltage points or short out parts that could result in fire, electric shock, or injury.

10. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.

11. Do not overload wall power outlets and extension cords as this may result in fire or electric shock.

12. To avoid electric shock or burn, do not disassemble this product. Send this product to an authorized service center when service or repair work is required. Call Customer Service for locations near you. Opening or removing covers may expose you to dangerous voltages, electrical currents or other risks. Incorrect reassembling of the product may cause electric shock when the product is subsequently used.

13. Avoid using the product during a storm. There may be a risk of electric shock from lightning.

14. Do not place the product where persons can step, trip, or fall on the product.

15. Do not place conductive objects over or near the antenna.

16. Do not use the product to report a gas leak while in the vicinity of the leak.

17. Do not install the base station or the handset charger near microwave ovens, radios, TV sets, speakers, or other electrical equipment. These appliances may cause interference to the product or experience interference from the product.

18. Unplug the base station or the charger adaptor from the wall power outlet and refer servicing to an authorized service center under the following conditions:
    a. If liquid had been spilled into the product.
    b. When the power supply cord or plug is damaged or frayed.
    c. If the product has been exposed to rain or water.
    d. If the product does not operate normally by following the operating instructions.

e. If the product has been dropped or housing has been damaged.
f. If the product shows a distinct change in performance.

Battery Safety Instructions

1. Use only manufacturer approved Nickel-Metal-Hydride (NiMH) rechargeable batteries and charger. Do not use other types of rechargeable batteries or non-rechargeable batteries. The batteries could short-circuit, and the battery enclosure may be damaged causing a hazardous condition.

2. Follow the charging instruction in this manual and instruction labels and markings in the handset and charger compartments.

3. Battery must be recycled or disposed of properly. Do not dispose the battery in a fire. The cells may explode.

4. Do not dispose of the battery in municipal waste. Check with local codes for disposal instructions.

5. Exercise care in handling the batteries in order not to short-circuit the battery with conductive materials such as rings, bracelets, keys, pocketknife, and coins. The battery or conductive material may overheat and cause burn or fire.

6. Do not expose batteries to rain or water.

7. Do not open or mutilate the battery. Released electrolyte is corrosive and may cause injury to eyes or skin. The electrolyte may be toxic if swallowed.

8. During charging, the battery heats up. This is normal and is not dangerous.

Regulatory Information

EP-436
FCC ID: NNA-EP-436
IC: 3059A-EP436
This device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Privacy of communications may not be ensured when using this phone.

1. The term IC: before the radio certification number only signifies that Industry of Canada technical specifications were met.

2. The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all devices ring when your telephone number is called. In most, but not all, areas the sum of the REN's of all devices connected to one line should not exceed 5.0. To be certain of the number of devices you may connect to your phone line, you should contact you local telephone company for the maximum REN in your area.

3. If your telephone equipment causes problems to the telephone network, the telephone company may ask you to disconnect your phone system from the line until the problem has been corrected. Consult with your local phone company for your rights if this happens.

4. Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper functioning of your telephone system. Consult with your local phone company for your rights if this happens.

5. This telephone system may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

6. This telephone system has been tested and found to comply with the limits for Class B digital devices, pursuant to Part 15 of the FCC Rules and RSS210 of the DOC Rules. These limits are designed to provide reasonable protection against harmful interference in a general public installation. Operations of these devices may still encounter interference from/to nearby TV's, VCR's, radios, computers, or other electronic devices. To minimize or prevent such interference, the telephone system should not be placed or operated near other electronic devices. If interference occurs, moving the base station and the handset farther away from them will often reduce or eliminate the interference.

7. However, there is no guarantee that interference will not occur in a particular installation. If this telephone system does cause interference to other electronic devices, which can be determined by turning the system off and on, the user is encouraged to try to correct the interference by one or several of the following Measures:
   a. Increase the space separation between the handset or base station and the device that is experiencing interference. We recommend at least 20 feet between the system and other electronic devices.
   b. Connect the base station to a power outlet on a circuit separate from that used by the device experiencing interference.
   c. Consult the dealer or an experienced electronic technician for help.

Congratulations

You have purchased an exceptional business communications tool from a leading telephone system manufacturer.

The EnGenius EP-436 4-line Telephone System is ideal for the small office/business and home office users. The EP-436 is the **longest range, multi-line telephone and 2-way radio communications system** providing users unparallel mobility and flexibility.

With sophisticated digital signal processing and high quality hardware designs, the EP-436 provides long-range telephone connections and 2-way handset-to-handset communications in a wide variety of business settings from multi-level office buildings, factories, hotels/resorts, convention facilities, warehouses, farms, business complexes, construction sites, and other demanding business environments.

The unique 2-way radio feature allows handsets to communicate with each other as digital, full-duplex 2-way radios. Members of work group(s) can be in contact with their co-workers while leaving phone lines available for incoming and outgoing calls. Handsets that are within range of each other can use the 2-way feature even while out of range of the base station. EP-436 can support up to 90 handsets.

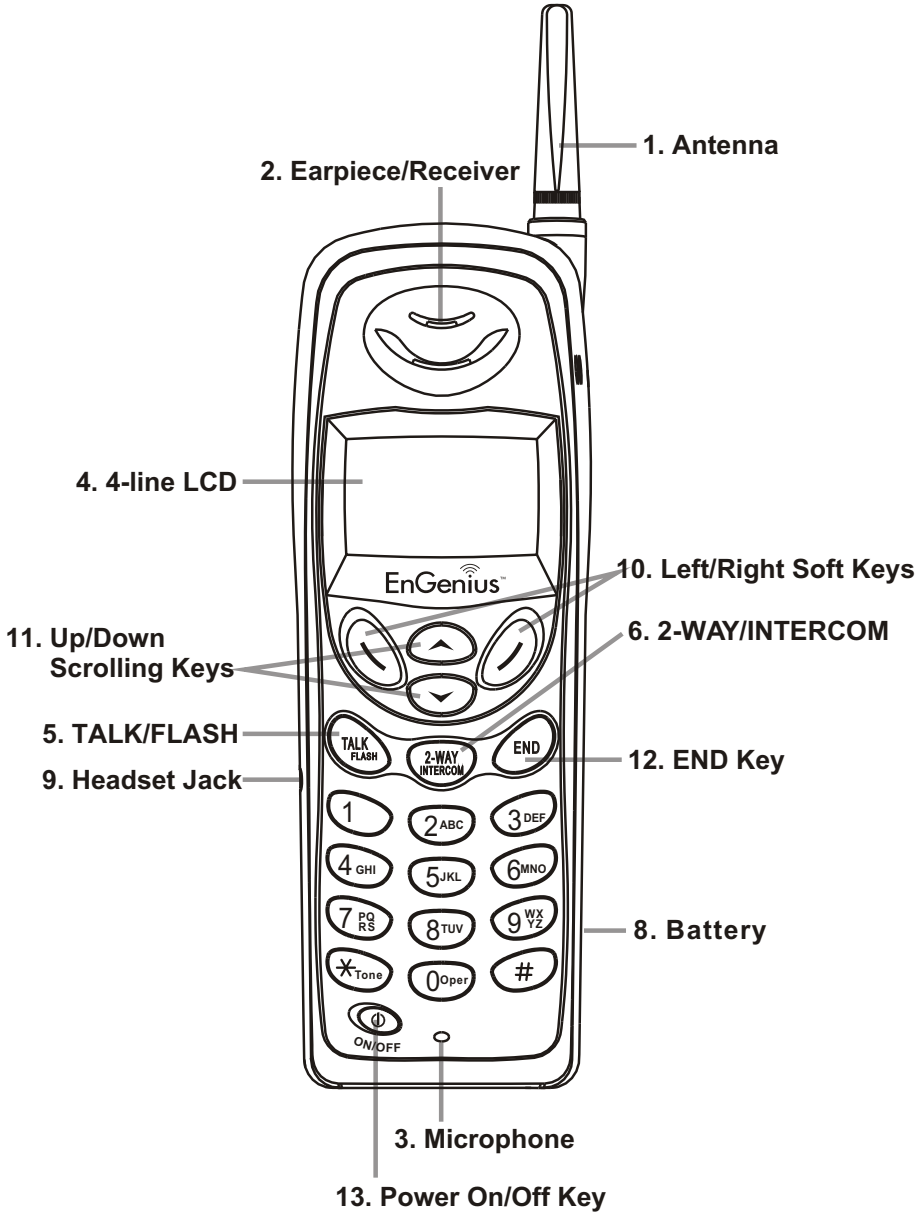
Equipment Checklist

1. In a Base + Handset package, please find the following components:
   a. Base Station x 1
   b. Base Antenna x 1
   c. Base AC/DC Adaptor x 1
   d. Handset x 1
   e. Handset Long Antenna x 1
   f. Handset Short Antenna x 1
   g. Battery Pack x 2
   h. Charger x 1
   i. Charger AC/DC Adaptor x 1
   j. Telephone Cord x 4
   k. Handset Carrying Case x 1
   l. Audio-In Cable
   M. User's Manual, Warranty Card

2. In a Handset package, please find the following components:
   a. Handset x 1
   b. Handset Long Antenna x 1
   c. Handset Short Antenna x 1
   d. Battery Pack x 2
   e. Charger x 1
   f. Charger AC/DC Adaptor x 1
   g. Belt Clip x 1
   h. User's Manual, Warranty Card

3. Optional Accessories:
   a. Outdoor Antenna Kit (including antenna and cable)
   b. Remote Repeater
   c. Rugged Carrying Case
   d. Lightning Protection Kit

Handset Illustration



Handset Features

Basic Handset Features

1. Antenna

2. Earpiece/Receiver

3. Microphone

4. 4-line LCD (Liquid Crystal Display)
   a. The LCD display has a LED (Light Emitting Diode) for backlighting.
   b. The 1st line consists of icons (see below).
   c. The 2nd and 3rd lines, maximum 14 characters each, display status, message, menu selections, or user-programmable alphanumerical characters.
   d. The last line displays the left and right soft key functions.
   e. Icons (from left to right):
      (i) **RSSI** (Receive Signal Strength Indicator) During a call, the number of bars is proportional to the radio signal strength received.
      (ii) **Call in-progress** (ON/OFF-Hook)
      Indicates if an external call is in progress.
      (iii) **Intercom in-progress**
      Indicates if an Intercom call is in progress.
      (iv) **Handset ID**
      Displays a handset icon and a 2-digit Handset ID.
      (v) **Two-Digit Address Index**
      Shows address index when viewing contents of the call logs.
      (vi) **Line Indicator**
      Indicates the line number being accessed by the handset.
      (vii) **Battery Strength**
      - Number of bars is proportional to the amount of battery time remaining.
      - Indicates charging when in charger cradle.

5. TALK/FLASH
   a. Starts or answers a telephone or intercom call.
   b. Toggles between calls in built-in call waiting operations.
   c. Sends a Flash signal to the phone line to get dial tone after you end a call, or to perform carrier provided, call waiting, etc. during a call.

6. 2-WAY/INTERCOM
   a. Places an intercom call to another handset ID or a group ID (group paging).
   b. Intercom calls are digital, full duplex, and are conducted without the assistance of the base, thus leaving the base's line handling capacity fully available.

7. Ringer
   a. Rings during an incoming call.
   b. Distinctive alert sounds indicating various events:
      (i) Single Beep: successful key entry
      (ii) Double beep: failed operation or invalid key entry, also indicates power on/off
      (iii) Periodic 1-Long-2-Short Beep (every 1 second): low battery Warning
      (iv) Periodic Long Series of Beeps (repeated every 30 seconds): indicates a call is on-hold

8. Battery

9. Headset Jack
   - 2.5 mm headset jack for hands-free operation

10. Left/Right Soft Keys
   - For making menu selections.

11. Up/Down Scrolling Keys
   a. Scroll through records and menu selections.
   b. Adjust receiver voice volume when in Talk mode.

12. END Key
   a. Ends a call.
   b. Leaves current menu operation, up one level.

13. Power On/Off Key
   - To turn off handset, press and hold power key for 2 seconds.

Additional Handset Features

1. Up to 90 handsets and 99 Handset IDs
   a. ID 10-99: individual Handset IDs. ID 10 and 11 are the first two ID's assigned by the base and are designated "administrators" who can change base settings such as greeting message and other base administrative functions.
   b. ID 01-09: Group ID. Handsets can "subscribe" from the handset menu to group(s) and be paged when a landline caller or an intercom caller enters a Group ID.

2. Over-the-air handset registration

3. Security
   • One of the 65,536 possible security codes is randomly selected by the base station during registration.

4. Ringer Vibrator

5. Call Waiting
   a. Notifies a handset of another / 2nd call from another phone line.
   b. Allows handset to toggle between 2 phone calls.

6. Caller ID
   • Displays incoming call phone number and name on the LCD (requires Caller ID service from the carrier)

7. Call waiting with Caller ID
   • Displays 2nd incoming call information on the same phone line when 1st call is in progress (requires Call Waiting with Caller ID service from the carrier)

8. Call Transfer
   a. Direct Transfer: transfer a telephone call to another handset without announcement.
   b. Announced Transfer: speak to the destination handset before transferring a telephone call.

9. Call Forwarding
   a. Forward all incoming phone calls to another handset.
   b. Forward all incoming phone calls to another landline or cellular phone number.

Notes:
1. Once enabled from the handset, all phone calls will be routed to the designated number until disabled. A warning message will appear on the LCD.
2. Intercom calls are not forwarded.
3. Group calls are not forwarded.

10. Call Conferencing
    a. 2-handset and 1-line conferencing
    b. 1-handset and 2-line conferencing

11. DND (Do Not Disturb, i.e., Silent Ring)

12. User programmable Flash key timing
    a. From an administrator handset (Handset 10 or 11), press MENU-9-2-4 to select flash key timing.
    b. 9-level (100 ms - 900 ms) timing selections.

    Note: The default value (100 ms) works in most areas. Changing this setting may cause the Flash key not to work. Change this value only if you are certain the new value will work.

13. Three Call Logs
    a. **Called Log**: Stores 10 phone numbers (up to 28 digit each) dialed most recently. Can perform last-number redial on all 10 Numbers.
    b. **Received Call Log**: 10 entries (14-digit phone number, 14 -character names, and time stamp), requires Caller ID service from the carrier.
    c. **Missed Call Log**: 10 entries (14-digit phone number, 14 -character names, and time stamp), requires Caller ID service from the carrier.
    d. Phone numbers and names can be saved into phonebook while being displayed.

14. Any Key Answer (except PWR, END, Silent Soft Key)

15. Keyguard
    • Prevents accidental dialing.

16. Dialing Prefix
    • Up to 14 digits, including pause(s), one access code can be preprogrammed to be added automatically in front of the dialed number when dialing from call logs, phonebook, and dial-and-send dialing.

17. Call Hold
    a. Places call on hold.
    b. Change battery while call is on hold.

18. Mute

19. Phonebook
    a. 30 entries, each stores a phone number or handset ID (up to 28-digit) and name (up to14-character)
    b. Alphabetically sorted display and search feature.
    c. Dial from number display.

20. Automatic 2-level transmit power control

21. Sixteen-level LCD contrast selections

22. Six-level earpiece voice volume selections

23. Five-level ringer volume selections (high/low/vibrate/vibrate-then-ring/off)

24. Three-level keytone volume selections (high/low/off)

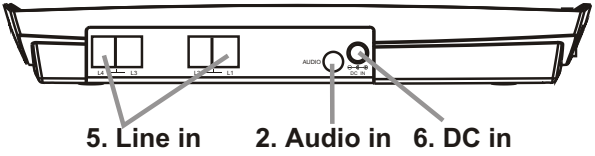
25. Four ringer type selections

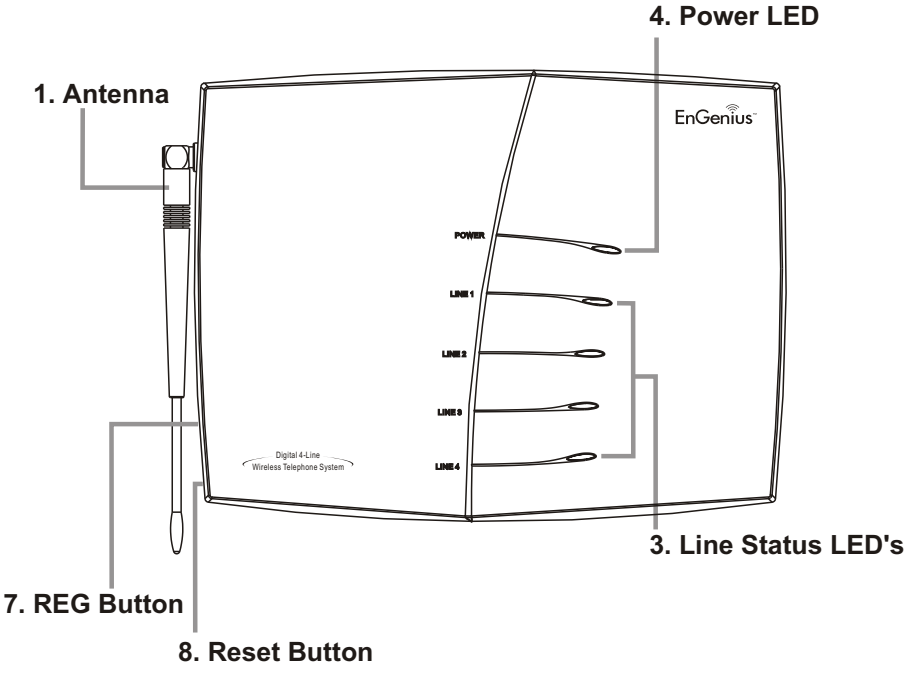
26. Four keytone type selections

27. Display call time duration for current call during and immediately after the call

28. Text Messaging:
    a. Text message is 25 characters max. This is to allow the destination handset to display the handset from which the message is sent.
    b. Sending Message: In view mode, handset can send a message to another handset or a group of handsets.
    c. Incoming Message: A distinctive tone alerts of an incoming message. The message indicator will stay on the LCD display for 8 seconds and then it is saved in memory. A total of 5 incoming messages can be saved.

Base Illustration





Base Features

Basic Base Station Features

1. Antenna
   a. When selecting a location for the base station, it is better to locate the base station as high as possible to avoid obstructions that may interfere with radio transmission.
   b. When using an outdoor antenna, locate the antenna (not the base station itself) as high as possible for a clear transmission path.

   Note: *The antenna port has a reverse thread connector; to remove antenna or cable, turn clockwise; to install, turn counterclockwise. Improper installation may damage the connector.*

2. Audio-in Jack (3.5 mm)
   • Provides MOH (Music on Hold).

3. Line Status LED's
   • LED lit indicates an active telephone line.

4. Power LED
   • LED lit indicates base station has power.

5. Line In
   a. Supports 4 simultaneous telephone line connections.
   b. Four standard 6p 2c connectors.

6. DC In
   • Connects to Base Station AC Adaptor.

7. Registration Key (REG)
   • Enters registration mode along with handset, assigns handset ID (10-99).

8. Reset Button
   a. Restores base station to factory settings:
      (i) Base Station security code
      (ii) Auto-Attendant (AA) Configuration:
         • On/Off, default = On
         • Number of rings before AA picks up, default = 2

- Custom greeting message cleared
- ID assigned to a phone line when AA is disabled, default = ID 10

(iii) Operator ID, default = ID 10
(iv) Registered handset ID table cleared

b. Call Forwarding table:
(i) Call Forwarding On/Off for all registered handsets, default = Off
(ii) Clear Call Forwarding numbers for all registered handsets

Notes:
1. Reset button is indented to prevent accidental system reset.
2. Because the base's security code is reset and the handset registration table is cleared, all handsets (including administrator) need to be re-registered after the base station is reset.

Additional Base Station Features

1. 4-channel Auto-Attendant
   a. 4 Auto-Attendant functions can be active at the same time in the event of 4 simultaneous incoming calls.
   b. Allows private paging to a single handset (with individual Handset ID) or group paging to a group of handsets (with Group ID).
   c. AA enable/disable on a per line basis by the administrator.
   d. When disabled for a line, the administrator can set all handsets to ring with an incoming call on that line, or a particular Handset ID (10-99, Group ID 01-09 is not allowed) can be assigned to have both incoming and outgoing call privileges on that line. See AA Configuration by Administrator.
   e. Up to 128 seconds of re-recordable main greeting message.

2. Optional Outdoor Antenna Kit with cable

3. Supports both DTMF and Pulse dialing
   a. From an administrator handset (Handset 10 or 11), press MENU-9-2-3 to select Tone or Pulse dialing mode.
   b. Default is Tone dialing.

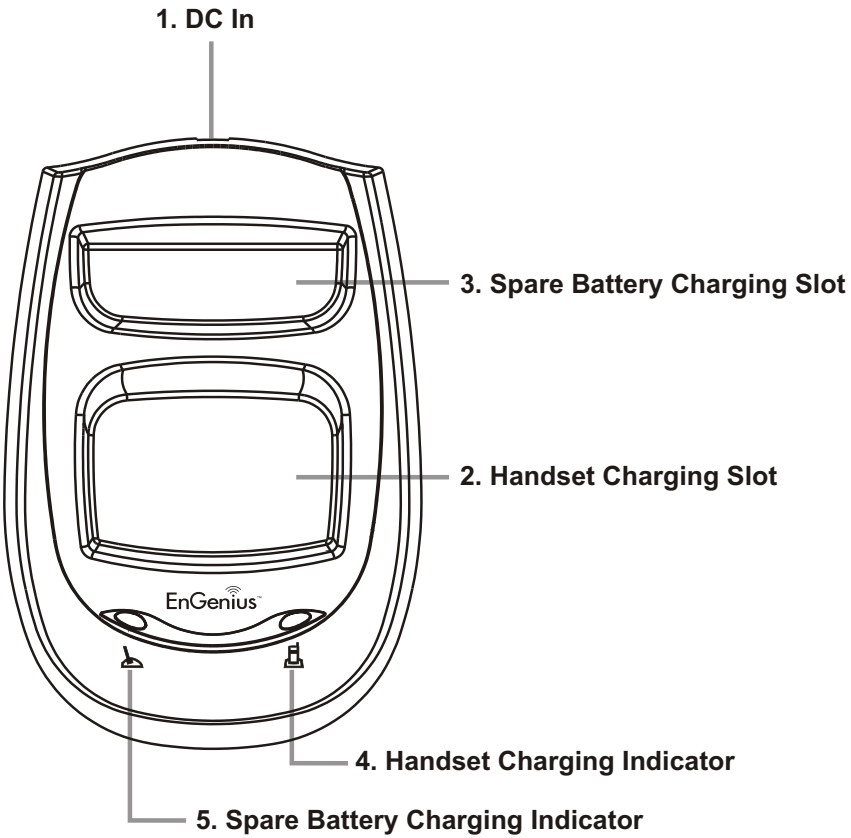
Administrator Features

Handsets 10 and 11 are designated administrators. Both have the same authority to perform base station administrative functions from their handset menu selections. No password is required

1. Auto-Attendant (AA) Configuration
   a. Sets number of rings before AA answers (2-9).
   b. Turns AA on/off for each of the 4 lines.
   c. If AA is turned off, select from two options
      (i) Ring all registered handsets.
      (ii) Ring a particular Handset ID (10-99). Only this particular Handset ID can receive incoming and make outgoing calls on that line as well.
   d. Records main greeting message.
   e. Playbacks main greeting message.
   f. Set Operator Handset ID. All calls addressed to the operator will be routed to this particular Handset ID.

2. System Configuration
   a. Removes Handset ID from the base station.
   b. Set next Handset ID to be assigned.

Charger Illustration



Charger Features

1. DC In
   - Connects to Charger AC/DC Adaptor.

2. Handset Charging Slot
   - Charges the handset battery when a handset is placed in cradle. (Approximately 90 minute fast charge time from empty.)

3. Spare Battery Charging Slot
   - Charges spare battery when battery is placed in slot. (Approximately 90 minute fast charge time from empty.)

4. Handset Charging Indicator
   a. LED is not lit: slot is empty, no/poor contact, or no power to the charger.
   b. LED is blinking red: battery is being charged.
   c. LED is green: battery is fully charged.

5. Spare Battery Charging Indicator
   a. LED is not lit: slot is empty, no/poor contact, or no power to the charger.
   b. LED is blinking red: battery is being charged.
   c. LED is green: battery is fully charged.

6. After battery is fully charged, charger enters a trickle charge mode.

7. It is impossible to overcharge the battery using this charger.

Notes:
1. Fully charge battery packs before first use.
2. Both handset and spare batteries can be charged at the same time.

Getting Started

Base Station Installation

1. Install base station antenna.

   Note: *The base station's antenna port has a reverse-thread connector; to install antenna or cable, turn counter-clockwise; to remove, turn clockwise. Improper installation may damage the connector.*

2. Plug the transformer end of the base station AC/DC adaptor into a standard AC electrical power outlet, plug the other end into the "DC In" jack on the back of the base station.

Note:
1. The base adaptor's DC plug is larger in dimension than the charger's DC plug. The charger adaptor's DC plug will not fit into the base's DC In jack.
2. The base station's power supply (DC Adaptor) and telephone line should be plugged into a surge protector with phone line protection.
3. It is recommended to use an UPS (Uninterruptible Power Supply) to prevent lost of telephone services in a power outage.

3. Plug one end of the phone cord into one of the 4 phone jacks marked L1-L4, starting from L1, plug the other end into the telephone outlet.

4. Repeat for additional phone lines. You can add phone lines at later times.

5. For best performance, maintain, at least, a distance of 1 meter (about 3 feet) between the base station and other electronic devices (e.g., TV, computer, stereo, fax machine, answer machine, cordless phone, etc.)

6. Recommended phone line features from the local phone company: Multiple phone lines "hunt group" is a useful feature and works well with this phone system. This feature "ties" multiple phone lines to a single phone number. When an outside caller calls this common phone number, the phone company automatically finds a free line. In a hunt group, the Call Waiting and the Caller ID with Call Waiting (or called Type II Caller ID) features are unnecessary because a 2nd call will come in on a separate line, rather than on the same line.

For a 2nd call coming in on a separate line, the phone system's built-in Call Waiting feature will alert the user and allow the user to toggle between 2 lines.

7. To use the Music/Message-On-Hold feature: Connect one end of a standard audio cable into a radio or audio player, and plug the other (3.5 mm) end into the MOH jack on back of the base.

8. Connecting an external telephone answering device:
   a. Follow instructions that come with the answering device.
   b. An exemplary configuration: install the external answering device in-between the wall phone jack(s) and the Base Station. Either a multiple of single-line answering devices or a multiple-line answering device can be used. You may want to disable the Base Station's Auto-Attendant function if that interferes with the external device's built-in Auto-Attendant.

Handset and Charger Installation

1. Plug the transformer end of the Charger AC/DC adaptor into a standard AC electric power outlet, plug the other end into the "DC In" jack on the back of the Charger.

2. Install battery pack onto the handset.

3. Install handset antenna.

4. Place handset onto the charger front slot. Battery is fully charged when the corresponding LED turns green (see Charger Features).

5. The phone system is now ready to perform basic functions such as making and receiving phone calls and intercom calls. No base station or handset programming is needed for basic operations.

Note:
1. Handset(s) packaged along with a Base Station are pre-registered at the factory. If you have a new handset, you will need to register the handset with the base station in order to be recognized as a member handset by the base and by other handsets. See Handset Registration.
2. Fully charge battery packs before first use.

Basic Operations

Making a Telephone Call

1. Press TALK, wait for dial tone, and then enter phone number.

2. Alternatively, you can enter phone number first then press TALK key. When using this method to dial out, you can use the Clear (Left) and Delete (Right) soft keys to edit the number entered. "Delete" erases the last digit entered. "Clear" erases the entire line but remains in the dialing mode.

3. To abort dialing, press END key.

Notes:
1. The Base Station will automatically search for an available line and dial out.
2. If all 4 lines are occupied, including if some lines are made unavailable to all handsets (lines can be dedicated only to certain handsets, see Auto-Attendant Operations), the LCD will show "No connection" and handset will return to standby.
3. If a link cannot be established, the LCD will show "No connection" after a 12-second time out.
4. A call duration timer will start displaying the length of the call after link is established (regardless if and when the call is answered).

Making an Intercom Call

1. Press Intercom key followed by a two-digit handset ID or Group ID.

2. To abort dialing, press END key.

Notes:
1. Intercom calls can be made regardless if the Base Station is present.
2. If a Group ID is entered, the first handset (belonging to that group) that answers will establish a link with the caller. See Handset Group Subscription.
3. If a link cannot be established, the LCD shows "No Connection" after a 12-second time out.

Redial

1. Press REDIAL (Left) soft key.

2. The LCD shows the last phone number dialed. To dial this number, press DIAL (Left) soft key.

3. Use Up or Down Arrow Key to scroll through the last 10 phone numbers dialed. Select and press DIAL soft key.

Notes: Intercom numbers (Handset ID) are not stored in the last 10 numbers dialed log.

Receiving a Telephone Call

1. When an incoming call arrives, the ringer will ring or vibrate unless the ringer has been turned off.

2. If the handset is on the charger cradle (ringer will be temporarily switched to "Ring" if it has been set to "Vibrate"), lift the handset and start conversation.

3. If the handset is not on the cradle, press any key (except PWR, END, and the Silent soft key) to answer.

Notes:
1. The LCD displays the line number of the call.
2. You can press SILENT (Left) soft key if you choose to ignore the call. Unlike turning off the ringer (from the handset menu), the SILENT key operation is valid only for the current call.
3. If Caller ID service is available, the LCD will display the incoming call information. If the LCD shows "Private" or "Unknown", the caller's information may have been blocked by the caller or the originating phone company.

Receiving an Intercom Call

1. When an intercom call arrives, the ringer will ring or vibrate unless the ringer has been turned off.

2. If the handset is on the charger cradle (ringer will be temporarily switched to "Ring" if it has been set to "Vibrate"), lift the handset and start conversation.

3. If the handset is not on the cradle, press any key (except PWR, END, and the SILENT soft key) to answer.

Notes:
1. The LCD displays the caller's Handset ID.
2. You can press the SILENT (Left) soft key if you choose to ignore the call. Unlike turning off the ringer (from the handset menu), the SILENT key operation is valid only for the current call.

Ending a Call:

To end a telephone or intercom call, press END key or place handset into charger cradle.

Adjusting Receiver (Earpiece) Voice Volume

1. Voice volume can only be adjusted during a call.

2. There are 6 levels of volume selections. Default = 4.

3. Use Up and Down Arrow key to turn up or down the earpiece volume.

4. The new setting remains effective for all future calls until changed.

Notes: To achieve maximum volume, adjust the position of the earpiece to align with the ear.

Placing a Call On Hold

1. When a call is in progress, it can be put on hold by pressing the Hold (Right) soft key.

2. To return to the conversation, press "Unhold" (Left) soft key.

Notes:

1. The call being placed on hold can only be "unheld" by the handset that puts it on hold.
2. When call is on hold, an alert tone will be 4 consecutive beeps every 30 seconds will remind the handset that a call is on hold.
3. If the operation (e.g., call transfer) after putting a call on-hold fails, the held call may be dropped.
4. You can power off the handset (e.g., change battery) while call is on hold. After power on again, you can continue the call by pressing UNHOLD (Left) soft key to terminate the hold state.

Mute

1. After a link is established, you can press Mute (Left) soft key to mute the handset microphone.

2. When mute is active, the caller will not hear your voice, but you will be able to hear the caller.

3. To leave the mute state, press "Unmute" (Left) soft key.

Note: Mute is effective only for the current call. It is automatically turned off after the call is ended.

Do Not Disturb (Silent Ring)

1. Enter the key sequence MENU Sounds Ring Volume, then select "Off". This will turn off the ringer until it is turn on again from the menu.

2. For temporary silencing the ringer when an incoming call arrives, press Silent (Left) soft key.

Key Guard

1. To prevent accidental dialing, you can press Menu (Right) soft key, then select Keyguard option. The handset keypad is locked. No key entry is accepted until the user performs the unlock procedure.

2. To unlock the keypad, press "Unlock" (Left) soft key, then, within 2 seconds, press the digit "1" to unlock.

3. Key Guard is in effect until unlocked.

Battery Recharge and Replacement

1. Charge the battery when one or several of the following happen:
   a. Phone makes low battery alert (1 long beep followed by 2 short beeps) every 30 seconds.
   b. Battery icon is empty.
   c. Phone does not respond when a key is pressed.
   d. LCD and backlighting become dim.
   e. Talk range shortfall is experienced.

2. You can replace the handset battery after placing the call-in-progress on hold.

3. Battery talk time and standby time vary depending on the talk/standby pattern and the operating distance. Putting the handset back to charger cradle as often as possible is recommended for best performance.

   Note: Use only manufacturer provided batteries and charger.

Advanced Operations

Handset Registration

1. If your handset(s) is purchased as part of a system, it has been pre-registered with the base station at the factory.

2. You need to register the handset with the base station in the following situations:
   a. If a handset displays a Handset ID "00," that means it is a new handset or the ID has been erased.
   b. In certain situations, you may want to change a handset's ID. For example, you want to change a particular handset from a user to an administrator (ID 10 or 11), or vice versa. Or in some rare occasions, you find another handset having the same handset ID.

3. Registration:
   a. Press handset Menu (Right) soft key.
   b. Press the number "6", this will enter the handset registration menu.
   c. Press and hold the base's Registration (REG) button for 2 seconds until the L1, L2, L3, and L4 LED come on.
   d. Press handset key "1", this completes the registration process. The base station will assign a handset ID between 10 and 99. The assigned ID will be displayed on the handset LCD, indicating successful registration.
   e. Repeat above steps for all additional handsets.
   f. The first two handsets registered will be given ID 10 and 11, which gives them administrator privileges.

4. De-registration:
   a. You can de-register a handset from a base. De-registration will reset the Handset ID to 00, erase the system security code, and free up the old ID for future registration.
   b. After deregistration, the handset will not be able to use the base to make or receive phone calls, nor can it intercom other handsets.
   c. Press handset Menu (Right) soft key.
   d. Press the handset number key "6", this will enter the handset registration menu.
   e. Press and hold the base's REG button for 2 seconds until L1, L2, L3, and L4 LED come on.

f. Press the handset number key "2", this completes the de-registration process. Upon successful de-registration, the Handset will show ID "00".

Notes:

1. The base has a 30 second registration timeout starting from pressing the REG button. The handset has a 12 second registration timeout starting from the registration or de-registration option has been selected. The base and handset will automatically exit registration mode after timeout.
2. Repeat registration or de-registration process if unsuccessful.

Advanced Registration:

1. Advanced registration functions can be performed by administrator handsets (ID 10 and 11) only.

2. Administrator handsets can perform advanced registration function as long as in range with the base station. The base station does not need to be in registration mode.

3. De-register a Handset ID by administrator:
   a. Make sure that the administrator handset is within the coverage range of the base station.
   b. Press administrator handset Menu (Right) soft key.
   c. Press the number "9", this will enter the handset administration menu.
   d. Press number "2", handset enters system setting menu.
   e. Press number "1", and enter the two-digit Handset ID to be cleared.
   f. Upon successful operation, the handset LCD will display "Done", otherwise it will show "Message not received, try again".

Notes:

1. De-registration by the administrator will disable a handset's ability to use the base station to make or receive phone calls. This also frees up the ID for future registration.
2. Handsets de-registered by the administrator can still perform intercom to other handsets unless the de-registered handset attempts to make a link to the base. At that time, the handset will be cleared and will no longer be able to use either the base or intercom functions until it performs the registration steps again.

4. Obtain a Specific Handset ID:
   a. If a particular Handset ID is preferred over sequentially assigned ID, the administrator can "tell" the base in advance what the next ID assignment should be.
   b. Press administrator handset Menu (Right) soft key.
   c. Press the number "9", this will enter the handset administration menu.
   d. Press number "2", handset enters system setting menu.
   e. Press number "2", and enter the two-digit Handset ID to be assigned next by the base.
   f. Upon successful operation, the handset LCD will display "Done," otherwise it will show "Message not received, try again."
   g. If the handset ID is already in use by another handset, the administrator will be alerted. In that case, the administrator can choose another ID or asks the handset having the desired ID to vacate by de-registering with the base.
   h. Perform registration immediately afterward for the handset desiring a specific ID to ensure that the ID is not taken by another handset.

Handset Group Subscription

1. Up to nine handset groups (1-9) can be defined and handsets can decide which group(s) they want to be in.

2. For example, Group 1 represents the Customer Service Group, Group 2 represents the Sales Group, and Group 3 is the Marketing Group. Suppose that Handset 10 wants to receive incoming calls for all Sales and Marketing related calls in addition to calls addressed to his/her own Handset ID. Then handset 10 will need To "subscribe" to Group 2 and Group 3.

3. Group Selections:
   a. Press handset Menu (Right) soft key.
   b. Press the number "5", this will enter the handset setting menu.
   c. Press number "2", handset enters group select menu.
   d. Press ADD (Left) soft key and enter the two digit group number (01-09) to add membership in a group.
   e. Repeat for all desired groups.
   f. Delete group selections by pressing DELETE (Right) soft key and enter group number.

Notes:
1. The handset can change group affiliations at any time.
2. The base (administrator) is not responsible for group assignments. Consequently, it cannot de-subscribe a handset from a group.
3. When an outside line or an intercom caller enters a group ID, all Handsets subscribed to this group will ring. The first handset to answer will establish a link with the caller. Afterward, it is a one-to-one call, not a one-to-many call.

Call Transfer

1. While a telephone call is in progress, you can place call on hold and transfer the call.

2. Press HOLD (Right) soft key to put call on hold.

3. Press OPTION (Right) soft key to enter selection menu.

4. Press number "2" and enter a two-digit Handset ID to call another handset extension.

5. Transfer Call:
   a. Unannounced Call Transfer:
      i. Press "END" before the destination handset answers, the call is automatically transferred to the destination handset.
   b. Announced Call Transfer:
      i. Speak to the destination handset.
      Ii. Press XFER (Right soft key) to end the announcement and transfer the call to the destination handset. Press END key to end the announcement with the other handset, and return to the HOLD menu where the user may now unhold the caller.

Notes: If the destination handset does not answer after handset paging timeout, the call is routed back to the originating handset.

3-Way Conferencing

1. While a telephone call is in progress, you can place call on hold and bring in another phone line or another handset for a 3-way conference.

2. Press HOLD (Right) soft key to put the current call on hold.

3. 3-Way Conferencing with a Second Handset:
   a. Press number "2" and enter a two-digit Handset ID to call another handset extension.
   b. After the second handset answers, press the CONF (Left) soft key.
   c. Two handsets and one phone line can now talk simultaneously. Any one party can drop out of the 3-way conferencing, leaving the remaining two parties still in conversation.

4. 3-Way Conferencing with a Second Phone Line:
   a. Press number "1" and enter a phone number to call another phone line.
   b. After second line answers, user may press SWITCH (Right) soft key to toggle between the two lines, or press CONF (Left) soft key to perform call conferencing.
   c. One handsets and two phone lines can now talk simultaneously.
      i. If one phone line hangs up, the handset continues talking to the remaining phone line.
      ii. If the handset presses END key, the 2nd phone line will be dropped. The handset and the first phone line continue conversation.

Notes:
1. 3-way conferencing between 3 handsets is not supported.
2. Unlike 3-way conferencing provided by the phone company, 3-way conferencing involving 2 phone lines will take up two physical lines, leaving only two lines left available for other handsets.

Call Forwarding

1. A handset can direct the base station to forward all future phone calls to be routed to another handset or another phone number.

2. Press handset Menu (Right) soft key.

3. Press the number "5", this will enter the handset setting menu.

4. Press number "3", handset enters call forwarding setting mode.

5. Use Up/Down arrow to scroll up and down the selection (Off, Another Handset, External Line).

6. Make a selection (default = Off) and press SAVE (Left) soft key.

7. When prompted, enter a two-digit handset ID or an external phone number, up to 14 digits.

8. A warning message "All calls are forwarded" will appear on the handset LCD.

9. To turn off call forwarding, repeat the above procedures and select "Off".

Notes:

1. Because this setting is stored both on the handset and on the base station, the handset must be in range with the base to change the setting.
2. A warning message will appear on the handset LCD to inform the handset that all calls are forwarded.

3. Calls can be forwarded to another handset or a phone number, but not both. Setting a call forwarding address will automatically replace the previous setting.

4. There is no call forwarding announcement, the caller is not aware of the call is being forwarded.

5. Call forwarding can be only one-hop. That is, for example, if Handset 11 forwards calls to Handset 22, but Handset 22 also sets calls forwarding to another handset, calls for Handset 11 are still routed to Handset 22.

Auto-Attendant (AA)

1. When enabled by the administrator, an automated attendant would greet a telephone line incoming call.

2. The caller will be prompted by the greeting message to enter a two-digit extension number (Handset ID) or press "0" for operator.

3. The greeting message is user programmable. The Handset ID that is designated as the operator is also user programmable.
   - Default greeting message (Main OGM): "Please enter the extension number or press 0 for the operator."
   - Default operator: Handset 10.

4. AA will ask for another handset ID if the first entry is invalid (no registered handset with that ID) with the announcement (OGM2): "The extension you entered is invalid, please try another extension or press 0 for the operator."

5. If there is no entry after time out, AA will announce (OGM3): "Please hold, your call is being transferred to the operator." And automatically ring the operator handset.

6. If the destination handset does not answer (busy, power off, or out of range) after handset paging time out, the AA prompts the caller for another extension number by announcing (OGM5): "The extension you've entered is busy or not available. Please enter another extension number or press 0 for the operator."

7. If the 2nd try is still not successful, AA will announce (OGM4): "Sorry, nobody can answer your call right now. Please try again later, goodbye." then drops the call.

Notes:
1. Intercom calls are not routed by Auto-Attendant.
2. Routing messages OGM2, 3, 4, and 5 are not user programmable.
3. The timeout is 5 seconds for entering extension number.
4. Call routing is at most 2 hops. That is, if both the 1st and the 2nd handsets do not answer, the call will be terminated. Call routed to the operator is final and will be terminated if the operator does not answer.

Call Waiting

1. A handset, while talking on one phone line, can be informed of the arrival of a new incoming phone call.

2. For example, suppose that Handset 15 is talking on Line 1. When a new call comes in on, say, Line 4, and the caller enters extension number "15" when prompted by the AA, or if the call is set to be routed to Handset 15 when AA is disabled.

3. The base station recognizes that Handset 15 is busy. Instead of announcing to Line 4 that Handset 15 is busy, the base sends an alert to Handset 15.

4. Upon receiving the alert, the handset sounds an audible double beep alert and LCD displays "New call on Line 4".

5. Handset 15 can:
   a. Ignore the new call; continue talking to Line 1.
   b. Press FLASH key to switch to Line 4.

c. Subsequent pressing of FLASH key will toggle between Line 1 and Line 4.
d. Press END key while talking to a line will terminate that particular call and automatically switch back to talking to the remaining line.

Notes:

1. This built-in call waiting is separate from the Call Waiting feature available from the local phone company. The phone company provided Call Waiting functions on the same phone line, while the Call Waiting functions for this system functions on two separate phone lines.
2. This feature only works for 2 lines, if a 3rd phone call comes for the same handset, the call will not be routed to the handset.
3. It is recommended to order from the local phone company Hunt Group feature for all your lines and not subscribe to the Call Waiting feature.

AA Configuration by Administrator

1. Administrator can change the following AA settings:
   - Record/playback new main greeting message.
   - Set number of rings before AA picks up a call.
   - Turn on/off the AA line-by-line.
   - Set Designated Handset ID for AA disabled line(s). Only the Designated Handset can use that particular line for incoming and outgoing calls. In other words, the line is now dedicated to a particular handset.
   - Designate an operator, the handset which would answer un-routable calls or when the caller chooses "Operator" when prompted.

2. Change AA Parameters:

a. From an administrator handset (Handset 10 or 11), press Menu (Right) soft key.
b. Press number "9", this will enter administration menu.
c. Press number "1", handset enters AA setting menu.
   i. Press "1" and follow instruction to record new greeting message.
   ii. Press "2" to playback the current greeting message.
   iii. Press "3" to set number of rings before the AA picks up a call. Use Up/Down arrow to choose between 2 and 9 rings.

iv. Press "4" to turn AA On/Off: This can be done for each line separately. Turning off the AA may be useful when
- The line is not used by a group of people.
- External answering machine is to be attached to the line.

Use Up/Down arrows to scroll through Line 1 through Line 4, and press "On" or "Off" soft keys.

v. Press "5" to set Dedicated Handset for each line: When AA is turned off, you can choose between two options: All handsets ring to incoming calls, or
- Designate one particular handset to have the only access
- to that particular line for both incoming and outgoing calls.

vi. Press "6" to set Operator for AA: Enter a two-digit Handset ID (default = Handset 10) as operator for all call addressed to the operator in AA operations.

Notes:

1. Only administrator can change AA settings.
2. Because AA setting is stored on the base station, the handset must be in range with the base to make changes.
3. The maximum recording time for the greeting message is 128 seconds.
4. Allowing each line's AA to be turned on or off separately is useful if different lines are used for different purposes.
5. When AA is disabled, the line can only be dedicated to an individual Handset ID. Group ID (01-09) will not be accepted.
6. The operator can be any individual handset; it doesn't need to be an administrator handset (Handsets 10 and 11).
7. The minimum number of rings before the AA picks up cannot be lower than two for the purpose of receiving the Caller ID message.

Change System Settings by Administrator

1. In addition to AA settings, there are two system parameters that can be changed by the administrator: clear (de-register) handset ID and set the next handset ID to be assigned by the base.

2. From an administrator handset (Handset 10 or 11), press Menu (Right) soft key.

3. Press number "9", this will enter administration menu.

4. Press number "2", handset enters System setting menu.

a. Clear Handset ID:
Press "1" and enter a two-digit Handset ID when prompted to clear this ID for later assignment.

b. Set next Handset ID to be assigned:
Press "2" and enter a two-digit Handset ID when prompted. This is the ID that will be given out by the base to the next handset registering with the base.

Notes:

1. De-registration by the administrator will disable a handset's ability to use the base station to make or receive phone calls. This also frees up the ID for future registration.
2. Handsets de-registered by the administrator can still perform intercom to other handsets unless the de-registered handset attempts to make a link to the base. At that time, the handset will be cleared and will no longer be able to use neither the base or intercom functions until it performs the registration steps again.

Phonebook Operations

1. You can store up to 30 entries in the phonebook. Each entry can contain a phone number or handset ID (up to 28 digits) and a name (up to14 characters).

2. To access the phonebook, enter menu (under Option 2) or use the Up/Down Arrow while the handset is in standby.

3. To add a new entry:
   a. Press ADD (Left) soft key.
   b. Enter a phone number when LCD prompts "Number?" Use DELETE (Right) soft key to delete the last digit entered. When completed, press SAVE (Left) soft key to save.
   c. You will then be prompted to enter a name for the phone number just entered.
      (i). Press the SAVE key to enter a phone number without a name. All records with no names will be placed on top of the list, in the order they are entered.
      (ii). To enter the letters of a name, press the corresponding keypad number one or more times according to the order of the character on the key. See table below for a list of available characters and their orders. For example, press "2" once for the character "A", twice for "B", etc.
      Use DELETE (Right) soft key to delete the last character entered. When completed, press SAVE (Left) soft key to Save.

Notes:

1. When entering a phone number, the cursor automatically advances to the next digit field. Use Up and Down Arrows to move the cursor backward or forward to insert (to the left of the cursor) or delete (the digit above the cursor, or left of the cursor if cursor is on the right of the last digit).
2. When entering a name, the cursor automatically advances to the next character field if you press a different key for the next character. If you need to enter consecutive characters from the same key, you can wait for the cursor to advance or use the Up/Down Arrow to move the cursor backward or forward manually. Also use Up and Down Arrows to move the cursor to insert (to the left of the cursor) or delete the character above the cursor, or left of the cursor if cursor is on the right of the last character.
3. By default, all letters are entered in the upper case. Use the * key to toggle between upper and lower cases. For example, pressing * once will switch to the lower case for all subsequent letters. Pressing * again will return to the upper case mode.
4. A "Pause" entry represents a 2.8 second delay in dialing the following digits, which is useful when calling a sequence of segmented numbers (e.g., access code, credit card number, auto-attendant entries, etc.) Pause is entered by pressing the * key twice (LCD displays P). Entering pause twice (PP) will result in 5.6 seconds pause in the dialing.
5. Character Table:

Key	Characters and Orders
1	' + , . * ( ) & 1
2	A B C 2
3	D E F 3
4	G H I 4
5	J K L 5
6	M N O 6
7	P Q R S 7
8	T U V 8
9	W X Y Z 9
0	0
*	Toggle case when in character editing * P (Pause) when in number editing
#	Space when in character editing # when in number editing

4. The entries are alphabetically sorted and stored as a list in an ascending order (A to Z) from the top of the list.
   a. If the phonebook is entered from the menu, the first entry displayed is the top of the list.
   b. If the phonebook is entered using the down arrow, the first entry displayed is the top of the list.
   c. If the phonebook is entered using the up arrow, the first entry displayed is the bottom of the list.

5. The first line of LCD display shows name and the 2nd line shows the phone number. If the phone number is longer than 14 digits, press OPTION (Right) soft key and select Option 3 to view the complete number.

6. To search for a record:
   a. Press a key that corresponds to the first character of the name you are looking for.
   b. For example, you are looking for "Peter", then press the number "7" once. Or, if you are looking for "Smith, John", then press "7" 4 times.
   c. The LCD displays the first entry starting with that alphabet or the next entry in the phonebook if there are no names starting with that letter.
   d. Use the Up/Down Arrow to locate the exact record you are looking for.
7. To erase/edit phonebook:
   a. Use Up/Down Arrow or the alphabetical search method to locate the record to be erased or edited.
   b. Press OPTION (Right) soft key to enter editing menu.
      (i). Press 1 and confirm to delete a record.
      (ii). Press 2 to edit phone number and name. Press SAVE (Left) soft key when finish.

8. Dial from display: press TALK or Intercom to dial the phone number or Handset ID displayed.

Menu Operations

1. Press MENU (Right) soft key while the phone is in standby.

2. Press "1" to lock keypad (see Key Guard).

3. Press "2" to view, search, delete, and edit the phonebook (see Phonebook).

4. Press "3" to view the last 10 numbers called, received, or missed. Records can be erased or edit/save into the phonebook.
   a. Press "1" to view the last 10 phone numbers dialed, starting from the most recent one. Use Up/Down Arrow to scroll through the list.
      (i). Press OPTION (Right) soft key for options.
         - Press "1" and confirm to erase the current record.
         - Press "2" to edit and save or save without editing into the phonebook.
         - Press "3" to view the complete number if the phone number is longer than 14 digits.
   b. Press "2" to view the last 10 phone numbers received, starting from the most recent one. Use Up/Down Arrow to scroll through the list.
      (i). Press OPTION (Right) soft key for options.
         - Press "1" and confirm to erase current record.
         - Press "2" to view the arrival date and time of the call.
         - Press "3" to edit and save or save without editing into the phonebook.
   c. Press "3" to view the last 10 phone numbers received but not answered, starting from the most recent one. Use Up/Down Arrow to scroll through the list.
      (i). Press OPTION (Right) soft key for options.
         - Press "1" and confirm to erase current record.
         - Press "2" to view the arrival date and time of the call.
         - Press "3" to edit and save or save without editing into the phonebook.
   d. The two-digit index on the upper right corner of the LCD display shows the location in ascending order, with 01 being the most recent call.
   e. While viewing any of the three call logs, press DIAL (Left) soft key to dial the phone number.

Notes:

1. Only phone numbers are stored in the three call logs. Intercom calls are not recorded.
2. Caller ID service is required from your local phone company in order to receive phone numbers, names and time stamps on incoming calls. The Received and Missed Call Logs will register no incoming calls if Caller ID service is not available.
3. If a missed call is logged, the handset will display "You have x missed calls" where x is the number of missed calls. This is to remind the user to check the log to see which calls he has missed. Upon checking the missed call log, the standby display will return to normal.

5. Press "4" to set sound-related settings:
   a. Press "1" to select ringer volume: use the Up/Down Arrow scroll through 5 options: Low, Vibrate, Off, High-then-Vibrate, and High. Press SAVE (Left) soft key to save selection. Default = High.
   b. Press "2" to select ringer tone: use the Up/Down Arrow scroll through 4 options: 0, 1, 2, and 3. Press SAVE (Left) soft key to save selection. Default = 0.
   c. Press "3" to select key volume when a key is pressed: use the Up/Down Arrow scroll through 3 options: High, Low, and Off. Press SAVE (Left) soft key to save selection. Default = Low.
   d. Press "4" to select key tone: use the Up/Down Arrow scroll through 4 options: 0, 1, 2, and 3. Press SAVE (Left) soft key to save selection. Default = 0.

6. Press "5" to change handset settings:
   a. Press "1" to set dialing prefix:
      (i). Use Up/Down Arrow to scroll and select to turn on or off the dialing prefix feature. Default = Off.
      (ii). If "On" is selected, the handset is prompted to enter a prefix, up to 14 digits.
      (iii). Use "Delete" (Right) soft key and Up/Down Arrow to edit prefix.
      (iv). When this feature is turned on, the LCD will prompt the user on each outgoing phone call except during redial or dialing by pressing the TALK key first whether to use the dialing prefix. The current prefix is also displayed. Press "Yes" (Left) or "No" (Right) soft key to add the prefix to the beginning of the number.
      (v). This feature is useful for access code, calling card, and credit card calls, etc.
   b. Press "2" to Group Select: see Handset Group Subscription.
   c. Press "3" to set turn Call Forwarding on, off, and if on the forward phone number or Handset ID. Default = Off. See Call Forwarding.
   d. Press "4" to clear call logs and phonebook:
      (i). Press '1" and confirm to delete the entire phonebook.
      (ii). Press "2" and confirm to clear the three call logs (Called, Received, and Missed).
   e. Press "5" to change the power-up LCD display to show, e.g., customer name or other greeting message:
      (i). Use Up/Down Arrow to move the cursor backward or forward to insert (to the left of the cursor) or delete (the character above the cursor, or left of the cursor if cursor is on the right of the last character).

(ii). Enter characters using the Character Table and method discussed in the Phonebook section.
(iii). When finished, press SAVE (Left) soft key to save change.

f. Press "6" to change LCD display contrast:
(i). Use Up/Down Arrow to scroll through values 1 to 16. Pick one that is most suitable to you. Default = 10.
(ii). Press SAVE (Left) soft key to save setting.

g. Press "7" to change backlight setting. On will turn on the backlight constantly, Off will turn off backlight. 8-seconds will turn on the backlight for 8-seconds when a key is pressed or an incomming call occurs. (default = 8-seconds)

7. Press "6" to register or de-register handset: See Handset Registration.

Text Messaging

1. Short text messages, up to 25 characters each, can be sent from a handset to another handset or a group of handsets.

2. Up to 5 outgoing messages can be edited, stored and sent. They are stored in the "Outbox" in the order they are entered, with Message 01 being the most recent entry. The message counter on the upper right corner of the LCD display shows the message ID.

3. Up to 5 received messages can be stored for later reference. They are stored in the "Inbox" in the order they are received, with Message 01 being the most recently received. The message counter on the upper right corner of the LCD display shows the message ID.

4. Viewing and editing outgoing text messages:
a. Press Menu (Right) soft key while the handset is in standby.
b. Press "7" to enter Text messaging menu, then press "2" to enter Outbox.
c. Press ADD (Left) soft key to enter a new text message.
(i). Enter characters using the Character Table and method discussed in the Phonebook section.
(ii). Use Up/Down Arrow to move the cursor backward or forward to insert characters to the left of the cursor or delete (the right soft key) the character above the cursor, or left of the cursor if cursor is on the right of the last character.
(iii). When finished, press SAVE (Left) soft key to save change.

d. Press OPTION (Right) soft key to erase or edit the current message:
   (i). Press "1" and confirm to erase message. Subsequent messages will be moved up in the Outbox.
   (ii). Press "2" to edit message. Follow the instructions above for entering a new message.

5. Sending a text message:
   a. While viewing the outbox message, press the intercom key, then destination handset ID to send out the message.
   b. The current message is sent.
   c. There will be no acknowledgement returned.

6. Receiving a text message:
   a. When a message arrives, a double beep alerts the arrival of a text message.
   b. The text message remains on the LCD display for 8 seconds and then is automatically stored in the Inbox.

7. Viewing received text messages:
   a. Press Menu (Right) soft key while the handset is in standby.
   b. Press "7" to enter Text messaging menu, then press "1" to enter Inbox.
   c. The LCD displays Message 01, the most recent received message. Use Up/Down Arrow to view previous messages.
   d. Press DELETE (Right) soft key and confirm to delete the current message. Subsequent messages will be moved up in the Inbox.

Technical Specifications

Electrical Specifications	Base Station	Portable Handset
Frequency	902-928 MHz	902-928 MHz
RF Power	Peak: 708 mW Average: 304 mW	Peak: 708 mW Average: 76 mW
Channel Spacing	200 kHz	200 kHz
Number of Channels	128	128
Modulation	MSK	MSK
Multiple Access	Frequency Hopping TDMA	Frequency Hopping TDMA
Frequency Hopping Rate	100 per second	100 per second
TDMA Frame Length	10 ms	10 ms
Number of Slots/Frame	8	8
Number of Users/Carrier	4	4
Receiver Sensitivity	< -108 dBm (@ BER 10^{-2})	< -108 dBm (@ BER 10^{-2})
Antenna Connector	Reverse TNC	Non-standard
Antenna Gain	2 dBi 5 dBi External (optional)	2 dBi (Long) 0 dBi (Short)
TX Power Control Range	NA	100-708 mW
Telephone Interface	RJ11 x 4	NA
Speech Coding	8 kbps G.729A	8 kbps G.729A
Channel Coding	8 kbps Convolutional + CRC	8 kbps Convolutional + CRC
Transmission Data Rate	170.678 kbps	176.678 kbps
User Data Rate	128 kbps duplex	128 kbps duplex
Duplex	Time Division Duplex (TDD)	Time Division Duplex (TDD)
Voice Quality	TIA/EIA-470B	TIA/EIA-470B
No. of System ID	65,536	65,536
Ring Signal	20-50 Hz, 12-90 Vrms	NA
Auto-Attendant Coding	8 kbps G.729	8 kbps G.729
Flash Time	100-900 ms programmable	NA
Power Source	120V/7V AC/DC Adapter	4.8 V, 750 mAh NiMH
Charger Current	NA	500 mA
Charge Time	NA	90 minutes (from empty)
Regulation Compliance	FCC Part 15, Part 68 CAN/DOC RSS210, CS03	FCC Part 15, Part 68 CAN/DOC RSS210, CS03 Hearing Aid Compatible
Operating Temperature	-10~60°C	-10~60°C
Storage Temperature	-10~70°C	-10~70°C
Humidity	20~75 %	20~75 %
Dimension without antenna	280 x 215 x 53 mm 8.5" x 11.0" x 2.1"	150 x 50 x 34 mm 2.0" x 5.9" x 1.3"
Weight	32 ounces	8.25 ounces

Notes:
1. NA = Not Applicable.
2. The manufacturer reserves the right to change designs and specifications without notice.

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